Hair Treatments

This sheet is about exposure to hair treatments in pregnancy and while breastfeeding. This information should not take the place of medical care and advice from your healthcare providers.

What are the different types of hair treatments?
Coloring, curling (permanents), bleaching, and straightening (relaxers) are some types of hair treatments.

For this fact sheet, hair coloring includes temporary dyes, semi-permanent dyes, and permanent dyes. Common chemicals used in hair dyes have been hydrogen peroxide, ammonia, and alcohols.

For hair curling or permanent wave, the most common chemicals used have been ammonium thioglycolate and ammonia. Hair bleaching chemicals have hydrogen peroxide. Hair straighteners (relaxers) use a variety of chemicals such as ammonium thioglycolate, or in older preparations, sodium hydroxide.

Any of these chemicals might irritate the skin, nose, and throat. A strong smell does not mean that you are having a high level of exposure.

Hair treatments that are not made in the United States (U.S.) might have dangerous substances or contaminants such as heavy metals, including lead, cadmium, nickel, arsenic, or mercury. In the U.S. the amount of metals allowed in cosmetics is regulated.

Hair treatments are regulated as cosmetics by the U.S. Food and Drug Administration (FDA). Cosmetics do not need FDA approval before they go to the market.

Do I absorb hair coloring/dye through my skin?
Under normal conditions, the amount of dye that is absorbed by the healthy skin of the scalp is small. The amount that can be absorbed depends on the health of the skin, the levels (dose) of active ingredients, the area exposed (how much skin comes in contact with the solutions) and how often you use it. Some hair treatments, such as highlights, lowlights, frosting and streaking, where the dye/color is applied directly on to the hair shaft, do not touch the skin. If used/applied as recommended by the manufacturer, it is unlikely that large amounts of these products would be absorbed into the body.

I get/perform hair treatments. Can it make it harder for me to become pregnant?
A meta-analysis of 19 studies reviewing the reproductive outcomes of hairdressers and cosmetologists reported a small increased chance for the time it took to get pregnant. Work settings and personal health and habits can be different among hairdressers and cosmetologists. For example, work places can differ in: types and mixtures of chemicals used, work conditions, ventilation, and working hours. Therefore, it is difficult to know if the job or other factors could make it harder to get pregnant.

Does getting/performing hair treatments increase the chance for miscarriage?
Miscarriage is common and can occur in any pregnancy for many different reasons. Studies have not been done to see if having hair treatments increases the chance of miscarriage in humans. Studies in laboratory animals exposed to dyes at levels 100 times higher than normally used in humans did not suggest a greater chance for miscarriage.

However, there are hair straightening treatments that can release a chemical called formaldehyde (also known as formalin and methylene glycol) into the air when heated. Studies have suggested an increased chance for miscarriage among people who work around formaldehyde.

Does getting/performing hair treatments increase the chance of birth defects?
Every pregnancy starts with 3-5% chance of having a birth defect. This is called the background risk. Based on the studies reviewed, getting or performing hair treatments is not expected to significantly increase the chance for birth defects when used correctly.

Does getting/performing hair treatments increase the chance for pregnancy complications?
Some studies have suggested that working as a cosmetologist or hairdresser might increase the chance for preterm delivery (birth before week 37) or having a baby that is smaller than expected (small for gestational age). Work settings and personal health and habits can be different among hairdressers / cosmetologists. For example, work places can differ in types and mixtures of chemicals used, work conditions, ventilation, and working hours. Therefore, it is difficult to know if the job or other factors were related to these findings in some studies.

Does getting/getting hair treatments in pregnancy affect future behavior or learning for the child?
We did not find any studies that addressed behavior or learning for the child. Therefore, it is not known if there is an increased chance of long-term problems for children exposed to hair treatments during pregnancy. While data is limited, there are reports on pregnancy outcomes of hairdressers and shop assistants. No increased chance for problems in their children were reported.

I work as a cosmetologist/hairdresser. Is there anything I can do to reduce exposures at work?
All studies support the importance of proper working conditions. Working in a well-ventilated area, wearing protective gloves, taking frequent breaks, practicing safe handling and storage of hair care products, and avoiding eating or drinking in the workplace are all important factors that can lower chemical exposures.

MotherToBaby has a general fact sheet on workplace exposures and ways to reduce potential exposures at https://mothertobaby.org/fact-sheets/reproductive-hazards-workplace/. Your worksite should provide the manufacturer's Safety Data Sheets (SDS) on all chemicals and proper personal protection for all parts of your job. Be certain to use them, even when not pregnant. By working in proper conditions, it can decrease the chemical exposures that can come from working and being around hair products.

If you perform hair treatments at home by yourself, it is important to follow all safety measures listed on the product label / instructions, work in a well-ventilated area, and wear the correct type of gloves.

Breastfeeding while performing/getting hair treatments:
We did not find studies looking at performing or getting hair treatments while breastfeeding. When used properly, it would be unlikely that large amounts of hair care chemicals would enter the breast milk because so little would get into the blood of the person getting or performing hair treatments. Be sure to talk to your healthcare provider about all your breastfeeding questions.

If a male performs/gets hair treatments, can it make it harder to get a partner pregnant or increase the chance of birth defects?
It is not known if hair treatments would affect could affect male fertility or increase the chance of birth defects. In general, exposures that fathers or sperm donors have are unlikely to increase risks to a pregnancy. For more information,

please see the MotherToBaby fact sheet Paternal Exposures at https://mothertobaby.org/fact-sheets/paternal-exposures-pregnancy/.

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